Amendments to the Specification:

Please amend paragraph [00010] as follows:

[00010] A network management system determines the physical topology of one or more networks. Determining the physical topology of the network allows a master proxy to determine that more than one device in its list has the same IP address and be able to discriminate between them. This is possible if and only if the topology is not referenced by IP address but by a different discriminator. In systems that use IP address as database key such discrimination is impossible. The method in U.S. Patent 5,926,462 issued July 20, 1999 to Schenkel et al could be used to create a topology database that allows such discrimination.
Firewall Rules

Please amend paragraph [00012] as follows:

[00012] The present invention uses a network management system to identify and place devices. HTTP redirection and proxy servers are used to select and access devices that have IP address range conflicts with other devices, and in non-routable private networks, or behind network firewalls. A master proxy then determines which proxies, if any, are used to communicate with a specific device. A user accesses the service via an HTTP compliant client. The ~~primary~~ master proxy then redirects the client to the appropriate device, be it the device itself or a proxy for the device to enable the client's request to communicate with the device. The URL of the request contains within itself a message that allows the proxy to find out which device is being acted upon and what protocol action to take. Like HTTP itself the protocol is connectionless. Each request requires a unique HTTP session. The method is compliant with HTTP protocols 0.9, 1.0 and 1.1.

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Please amend paragraph [00015] as follows:

[00015] The methods are recursive. Methods 3 and 4 are recursions of 1 and 2, and the methods can be joined and extended indefinitely. Once a given proxy is seeded it can determine which path to take to make a proxy connection between a client and a device, i.e., determine the remaining path to be traversed for the given proxy.

Please amend paragraph [00026] as follows:

[00026] Referring to Figure 1, there is shown a block diagram of a system for configuring proxy servers, hereinafter proxies. The lower portion of the drawing graphically shows the state transitions of the system of Figure 1. A network management system (NMS) 10 is connected to a communications network 11 and to a database store 12. Initially the NMS 10 discovers devices and their attributes, which is illustrated graphically at A between 10 and 11 and as step A in the state transitions. Next the NMS 10 stores devices attributes and their connectivity in the database 12, as shown at B in the drawings. The proxy configuration 13 is seeded with device and attribute information as well as device location at C. Firewall information from Firewall Rules 14 is fed to the proxy configuration 13 at step D. The supplying of firewall information may either be manual or automatic. Proxy paths 15 between device pairs are determined and stored at step E. Proxies 16 then obtain the path list from proxy paths 15 at step F and are configured.

Please amend paragraph [00028] as follows:

[00028] In Figure 3, a proxy 30 forwards to an HTTP server, when the client 31 seeks a connection to device 32. As in Figure 2, A_S, A_F, B_S and B_F indicate the same steps in the state transitions, while C_S indicates an HTTP Proxy Request/Response start,

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and C_F indicates a Proxy Request/Response Finish. In this case a proxy server 30 can identify and access ~~to~~ the device 32 but the device 32 is inaccessible to the client 31.

Please amend paragraph [00030] as follows:

[00030] A further example is shown in Figure 5 in which access is obtained through multiple proxies to an HTTP server. As before, a client 50 accesses a proxy 51 at A which can identify the device 53, but access is through a second proxy 52 at B and the second proxy 52 is inaccessible to the client 50. Therefore, the methodology of the present invention creates a communication channel between the first proxy 51 and the second proxy 52. The state transitions A_S, A_F, B_S, B_F, C_G, C_F, D_S, D_F are as explained in relation to Figure 4, and E_S is an HTTP proxy Request/Response start, and E_F is a proxy Request/Response finish. The recursive portion of the transitions is shown by the elliptical arrow, with the letters, A, B, C, D and E illustrating the states of the process from client 50 to proxy 51 to proxy 52 to device 53, and back through proxy 52 to proxy 51 and to client 50.

Other Applications of the Invention

Please amend paragraph [00034] as follows:

[00034] The invention redirects clients to the device or proxy by using a telnet url which will launch a telnet client that instantiates a connection using the ~~ip~~ IP address and TCP port specified in the URL. The URL is formatted as follows:

telnet://{ip}:{tcp port}

where 'telnet' is the protocol ~~specifier.~~ specifier, {ip} is either a numeric IP address or a fully qualified domain name, and {tcp port} is the tcp port that is used for the connection.

FTP URL

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